

## Homework WS #9

I will be able to simplify expressions using the distributive property.

Name

Per.

## New

1.) Simplify by combining like terms.

a.)  $6x + 5 + 2x + 8$

$8x + 13$

b.)  $-4x - 10 + 3x - 4x$

$-4x + 3x - 4x - 10$

$-8x + 3x - 10$

$-5x - 10$

c.)  $-17 - 3x - 3x + 2$

$-17 + 2 - 6x$

$-6x - 17$

d.)  $3xy + 5xy + 8 - 15$

$8xy - 7$

e.)  $5a^2 - 9a^2 + 3 - 8$

$-4a^2 - 5$

f.)  $21 + 5 - 18 + 2x - 7x$

$3 + 5 + (-5x)$

$-5x + 8$

## MULTIPLY!

2.) Use the distributive property (rainbow) to simplify the following problems.

a.)  $3(6 \text{ cats} + 4 \text{ dogs})$

$18 \text{ cats} + 12 \text{ dogs}$

b.)  $2(3 \text{ cups sugar} + 2 \text{ eggs})$

$6 \text{ cups sugar} + 4 \text{ eggs}$

c.)  $4(6 \text{ pens} + 4 \text{ erasers})$

$24 \text{ pens} + 16 \text{ erasers}$

d.)  $5(w + 2)$

$5w + 10$

e.)  $4(z - 5)$

$4z - 20$

f.)  $-8(x + 2)$

$-8x - 16$

g.)  $(5x - 2)(-7)$

$-7 \cdot 5x - 2(-7)$

$-35x + 14$

h.)  $-1(3 - 2x)$

$-3 + 2x$

i.)  $5(\$6x + \$8y + z)$

$\$30x + \$40y + 5z$

j.)  $-3(5x - 4y + z - 9)$

$-15x + 12y - 3z + 27$

3.) Distribute and then combine like terms:

These should have at least one line of work before your answer!!!!

a.)  $2(3x + 1) + x$

$6x + 2 + x$

$7x + 2$

b.)  $-2(3a - 5) + 2a$

$-6a + 10 + 2a$

$-4a + 10$

c.)  $(5m + 2)(-4) + 12$

$-20m + (-8) + 12$

$-20m + 4$

4.) You were just hired for a new job. Your boss said that you need to wear dress pants and a dress shirt to work. You want to buy 4 new pants and 4 new dress shirts.

You found a pair of pants on sale for \$25, so you decide to buy 4 of them in different colors. You also find a button down shirt you like for \$14 and decide to buy 4 of those in different colors. You then remember you don't have any shoes to match, but you can't afford 4 pairs so you just buy 2 pairs for \$30 each.

Write an expression below that represents this story, THEN find the total cost of your new work clothes.

$4(25) + 4(14) + 2(30)$

$100 + 56 + 60 =$

$100 + 116 = 216$